



1/12

RECEIVED

AUG 09 2002

## SEQUENCE LISTING

TECH CENTER 1600/2900

<110> Abbott Laboratories  
Billing-Medel, Patricia A.  
Cohen, Maurice  
Colpitts, Tracey L.  
Friedman, Paula N.  
Gordon, Julian  
Granados, Edward N.  
Hodges, Steven C.  
Klass, Michael R.  
Kratochvil, Jon D.  
Russell, John C.  
Stroupe, Stephen D.  
Yu, Hong

COPY OF PAPERS  
ORIGINALLY FILED

---

<120> METHODS AND REAGENTS USEFUL FOR  
DETECTING DISEASES OF THE BREAST

<130> 6130.US.P1

<140> 09/110,720  
<141> 1998-07-07

<150> US 08/889.127  
<151> 1997-07-07

<160> 37

<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 270  
<212> DNA  
<213> Homo sapiens

<400> 1  
gtcaccacca tcaggacaag tgtaacctt aagctaaatg aaggcaagtg tagtttgaaa 60  
aatgctgacg tggccccga gggctgcga ccagcactac cagagaagca cagctcgat 120  
aaagagagct tccgctacgt aaaccttaca tgcagctctg gcaagcaagt cccaggagcc 180  
cctggccgac caagcaccccc taagggaaatg ttatcactg ttgagtttga gcttgaaact 240  
aaccaaaaagg aggtgacagc ttcttgtgac 270

<210> 2  
<211> 275  
<212> DNA  
<213> Homo sapiens

<400> 2  
ggaaatgtt atcaactgttg agtttgagct tgaaactaac caaaaggagg tgacagcttc 60  
tttgtgacctg agctgcacg taaagcgaac cgagaagcgg ctccgtaaag ccattccgcat 120  
gctcagaaag gccgtccaca gggagcagtt tcacctccag ctctcaggca tgaacctcgat 180  
cgtggctaaa aaggctccca gaacatctga acgccaggca gagtcctgtg gagtgggcca 240  
gggtcatgca gaaaaccaat gtgtcagttt caggg 275

<210> 3  
 <211> 254  
 <212> DNA  
 <213> Homo sapiens

<400> 3  
 agcggctccg taaagccatc cgcacgctca gaaaggccgt ccacagggag cagttcacc 60  
 tccagctctc aggcatacgac ctcgacgtgg ctaaaaagcc tcccagaaca tctgaacgcc 120  
 aggccatgtc ctgtggagtgc ggccagggtc atgcagaaaa ccaatgtgc agttgcagg 180  
 ctgggaccta ttatgtatgaa gcacgagaac gctgcatttt atgtccaaat ggaaccttcc 240  
 aaaatgagga agga 254

<210> 4  
 <211> 225  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 ggaaggacaa atgacttgtg aaccatgccc aagaccagga aattctgggg ccctgaagac 60  
 cccagaagct tggaaatatgt ctgaatgtgg aggtctgtgt caacctgtgt aatattctgc 120  
 agatggctt gcacccgtcc agctctgtgc cctggcactg ttccagcctg aagctggctg 180  
 aacttcctgc ttccccgtgt gaggaggcct tgccacccaaa catca 225

<210> 5  
 <211> 245  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (91)...(91)  
 <223> n = a or g or c or t/u, unknown, or other at  
       position 91

<400> 5  
 ctgtggagga ggcccttgcac ccaaacatca gggagctact tcctttcagg actgtgaaac 60  
 cagagtccaa tggcacccatc gacatttcta naacaccacc actcaccgat gtattcggtg 120  
 cccagtggtt acataccagc ctgaatttgg aaaaaataat tgtgtttctt gcccaggaaa 180  
 tactacgact gactttgtatg gctccacaaa cataacccag tgtaaaaaaca gaagatgtgg 240  
 aggggg 245

<210> 6  
 <211> 206  
 <212> DNA  
 <213> Homo sapiens

<400> 6  
 gttcacctgg acatattctac aacaccacca ctcaccgatg tattcgtgc ccagtggaa 60  
 cataccagcc tgaatttggaa aaaaataatt gtgtttcttcccaggaaat actacgactg 120  
 actttgtatgg ctccacaaac ataacccagt gtaaaaacag aagatgtggaa ggggagctgg 180  
 gagatttcac tgggtacattt gaatcc 206

<210> 7  
 <211> 181  
 <212> DNA  
 <213> Homo sapiens

```

<220>
<221> misc_feature
<222> (55)...(55)
<223> n = a or g or c or t/u, unknown, or other at
      position 55

<221> misc_feature
<222> (162)...(162)
<223> n = a or g or c or t/u, unknown, or other at
      position 162

<400> 7
tgaatcccc aactacccag gcaattaccc agccaacacc gagtgtacgt ggacnatcaa      60
cccacccccc aagcgccgca tcctgatcgt ggtccctgag atcttcctgc ccatagagga      120
cgactgtggg gactatctgg ttagtgcggaa aacctttca tncaattctg tgacaacata      180
t                                         181

<210> 8
<211> 280
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (81)...(81)
<223> n = a or g or c or t/u, unknown, or other at
      position 81

<221> misc_feature
<222> (125)...(125)
<223> n = a or g or c or t/u, unknown, or other at
      position 125

<221> misc_feature
<222> (174)...(174)
<223> n = a or g or c or t/u, unknown, or other at
      position 174

<400> 8
caacatatga aacctgccag acctacgaac gccccatcgc cttcacctcc aggtcaaaga      60
agctgtggat tcagttcaag nccaatgaag ggaacagcgc tagagggttc caggtcccat      120
acgtnacata ttagtggggac taccaggaac tcattgaaga catagttcga gatngcaggc      180
tctatgcatt ttagaaccat cagggaaatac ttaaggataa gaaaacttatac aaggctctgt      240
ttgatgtcct ggcccatccc cagaactatt tcaagtacac                         280

<210> 9
<211> 261
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (79)...(79)
<223> n = a or g or c or t/u, unknown, or other at
      position 79

<221> misc_feature

```

<222> (258)...(258)  
<223> n = a or g or c or t/u, unknown, or other at  
position 258

<400> 9  
gaaacttatac aaggctctgt ttgatgtccct ggcccatccc cagaactatt tcaagtacac 60  
agcccaggag tcccgagana tgtttccaag atcgttcatc cgattgtac gttccaaagt 120  
gtccaggtt ttgagacctt acaaatgact cagccccacgt gccactcaat acaaatgttc 180  
tgctataggg ttggggac agagctgtct tccttctgca tgtcagcaca gtcgggtatt 240  
gctgcctccc gtatcagnga c 261

<210> 10  
<211> 282  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (76)...(76)  
<223> n = a or g or c or t/u, unknown, or other at  
position 76

<221> misc\_feature  
<222> (132)...(132)  
<223> n = a or g or c or t/u, unknown, or other at  
position 132

<221> misc\_feature  
<222> (212)...(212)  
<223> n = a or g or c or t/u, unknown, or other at  
position 212

<221> misc\_feature  
<222> (248)...(248)  
<223> n = a or g or c or t/u, unknown, or other at  
position 248

<400> 10  
ctcagccac gtgccactca atacaaatgt tctgtatacg ggttgggtgg acagagctgt 60  
cttccttctg catgttagca cagtcgggta ttgtgcctc ccgtatcagt gactcattag 120  
agttcaattt tnatacgataa tacagatatt ttgttaattt gaacttgggtt tttcttccc 180  
agcatcgtgg attagactg agaatggctt tnagtggcat cagcttctca ctgctgtggg 240  
cggatgtntt ggatagatca agggctggct gagctggact tt 282

<210> 11  
<211> 210  
<212> DNA  
<213> Homo sapiens

<400> 11  
gagaatggct ttgagttggca tcagcttctc actgctgtgg gcggatgtct tggatagatc 60  
aagggtggc tgagctggac ttgggtcagc ctaggtgaga ctcaccgtgc cttctgggt 120  
cttactcttc ctcaaggagt ctgttagtggaa aaggaggcca cagaataagc tgcttattct 180  
gaaaacttcag cttcctctag cccggccctc 210

<210> 12  
<211> 279

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (171)...(171)  
<223> n = a or g or c or t/u, unknown, or other at position 171

<400> 12  
ttcacctgtcc ttctggggtc ttactcctcc tcaaggagtc agtagtgaa aggaggccac 60  
agaataaagct gcttattctg aaacttcagc ttctcttagc ccggccctct ctaagggagc 120  
cctctgcact cgtagtgcagg ctctgaccag gcagaacagg caagagggga nggaaggaga 180  
cccctgcagg ctccctccac ccacctttag acctgggagg actcagtttc tccacagcct 240  
tctccagcct gtgtgataca agtttgatcc caggaactt 279

<210> 13  
<211> 289  
<212> DNA  
<213> Homo sapiens

<400> 13  
atgtctccag aagtgccttag tttttatcta ttcttaattc ttctgtctt tttttttcac 60  
gagcactgct tagaactcaa gttcctggga tcaaacttgt atcacacagg ctggagaagg 120  
ctgtggagaa actgagtcct cccaggtctc aagggtgggtg gagggagcct gcaggggtct 180  
ccttcctcc cctcttgctt gttctgcctg gtcaagagcct gcacacaggt gcagagggtct 240  
cccttagaga gggccgggct agaggaagct gaagttttag aataagcag 289

<210> 14  
<211> 199  
<212> DNA  
<213> Homo sapiens

<400> 14  
actaaggact tctggagaca taataatgtt cattattgc cagccttcct cgttgcaagc 60  
ttccacccctg cagcaaatgc actatgttgc ctctcgacc ttctgtgtt ccctctgaca 120  
ctctgtgttgc cattgcctgtt gggactgggg agttcagggtt aatgttattt tcctcgttgg 180  
atgagaatca tcaattgtt 199

<210> 15  
<211> 1949  
<212> DNA  
<213> Homo sapiens

<400> 15  
ggaaatgtt atcaactgttg agtttgagct tgaaactaac caaaaaggagg tgacagcttc 60  
ttgtgacctg agtgcacatcg taaagcgaac cgagaagcgg ctccgttaaag ccatccgcat 120  
gctcagaaag gccgtccaca gggagcagtt tcacccctcag ctctcaggca tgaacctcg 180  
cgtggctaaa aagcccttca gaacatgtt acggcaggca gagtcctgtt gagttggcca 240  
gggtcatgtt gaaaaccaat gtgtttagttt cagggctggg accttattatg atggaggac 300  
agaacgttgc attttatgtt caaatggaaat cttccaaaat gaggaaggac aaatgacttg 360  
tgaaccatgc ccaagaccat gaaattttctgg ggcctgtt accccagaag ctttggaaat 420  
gtctgaatgt ggaggtctgt gtcaacatgtt tgaatatttgc gcatgttgc ttgcacccctt 480  
ccagctctgtt gcccctggca cgttccagcc tgaagctgtt cgaacttccctt gctttccctt 540  
tggaggaggc cttgccacca aacatcggtt agtacttcc ttccaggact gtgaaaccag 600  
agttaatgtt tcacccgttccatttcttacaa caccaccat caccatgtt ttcgttgc 660  
agtggaaaca taccagcctt gtttggaaa aaataattgtt gtttcttgc cagggaaat 720

tacgactgac tttgatggct ccacaaacat aaccagtgt aaaaacagaa gatgtggagg	780
ggagctggga gatttcactg ggtacatga atccccaaac tacccaggca attacccagc	840
caacaccgag tgtacgtgga ccatcaaccc accccccaaag cgccgcattcc tgatcggt	900
ccctgagatc ttccgtccca tagaggacga ctgtggggac tatctggta tgcgaaaac	960
ctcttcatcc aattctgtga caacatatga aacctgccc acctacgaac gccccatcgc	1020
cttcacccccc aggtcaaaga agctgtgat tcagttcaag tccaatgaag ggaacagcgc	1080
tagagggttc caggtcccat acgtgacata tgatgaggac taccaggaaac tcattgaaga	1140
catagttcga gatggcaggc tctatgcac tgagaaccat cagggaaatac ttaaggataa	1200
gaaacttatac aaggtctgt ttgatgtct ggcccatccc cagaactatt tcaagttacac	1260
agcccaggag tcccgagaga tggttcaag atcgatc acgtgttac gttccaaagt	1320
gtccagggtt ttgagacctt acaaataact cagcccacgt gcccactaat acaaatagtt	1380
tgctataggg ttgtgggac agagctgtct tccttctgca tgcagcaca gtcgggtatt	1440
gctgcctccc gtatcagtga ctcatttagag ttcaatttt atagataata cagatatttt	1500
ggttaattga acttggttt tctttccag catcggtt gtagactgag aatggcttt	1560
agtggcatca gcttcact gctgtggcg gatgtttgg atagatcaag ggctggctga	1620
gctggacttt ggtcagccta ggtgagactc acctgtcctt ctgggttact ccttcctc	1680
aaggagtcg tagtgaaag gaggccacag aataagctgc ttattctgaa acttcagctt	1740
cctctagccc ggcctctct aaggggagcc tctgcactcg tgcagggcgtt ctgaccagc	1800
agaacagtca agaggggagg gaaggagacc cctgcaggct ccctccaccc accttgagac	1860
ctgggaggac tcagttctc cacagccctt tccagccgtt gtgataacaag tttgatccc	1920
gaaactttagt ttctaaggc tgctcgta	1949

&lt;210&gt; 16

&lt;211&gt; 2386

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<400> 16	
gtcaccacca tcaggacaag tggtaacccctt aagctaaatg aaggcaagtg tagttgaaa	60
aatgctgagc tggttcccgaa gggctcgca ccagcactac cagagaagca cagctcgta	120
aaagagagct tccgctacgt aaacccatac tgcaatctg gcaagcaatg cccaggagcc	180
cctggccgac caagcacccc taaggaaatg tttatcactg ttgatgttga gtttggaaact	240
aaccaaaagg aggtgacagc ttcttgcac ctgagctgca tggtaaaagcg aaccgagaag	300
cggctccgtt aaggccatccg catgctcaga aaggccgtcc acaggggagca gtttccaccc	360
cagctctcag gcatgaacctt cgacgtgtt aaaaagccctc ccagaacatc tgaacgcccag	420
gcagagtcctt gtggagtggg ccagggtcat gcagaaaacc aatgtgtcag ttgcagggtt	480
gggacctatt atgatggagc acgagaacgc tgcattttat gtcggaaatgg aaccccttccaa	540
aatgaggaag gacaaatgac ttgtgaacca tggccaaagac cagggaaattc tggggccctg	600
aagaccccaag aagcttggaa tatgtctgaa tggaggttgc tggtaatcc tggtaat	660
tctgcagatg gcttgcacc ttgccagctc tggccctgg gcacgttcca gcctgttact	720
ggtcgaactt cctgtttccc ctgtggagga ggccttgcca cccaaatcga gggagctact	780
tcctttcagg actgtgaaac caggttca tggccactt gacatttcta caacaccacc	840
actcaccgat gtattcggtt cccagtggaa acataccagc ctgatattttt aaaaaataat	900
tgtgtttttt gcccaggaaa tactacgact gacttgcattt gctccacaaa cataacccag	960
tgtaaaaaca gaagatgtgg agggggatgtt ggagatttca ctgggttacat tgaatcccc	1020
aactacccag gcaatttaccc agccaaacacc gagtgttacgt ggaccatcaa cccacccccc	1080
aagcgccgca tcctgtatgtt ggtccctggat atcttccctgc ccatagagga cgactgtggg	1140
gactatctgg tggatgtggaa aaccccttca tccaaattctg tgacaacata tggatgttgc	1200
cagacccatcg aacggccccc cgccttccacc tccaggtaaa agaagctgtg gattcagttc	1260
aagtccaaatg aaggaaacag cgcttagaggg ttccagggtcc catacgttacat atatgttac	1320
gactaccagg aactcatttga agacatgtt cgagatggca ggcttatgc atcttggaaac	1380
catcaggaaa tacttaaggaa taagaaactt atcaaggctc tggatgttgc tctggcccat	1440
ccccagaact atttcaagta cacagcccgat gagtcccgag agatgtttcc aagatcggtt	1500
atcccgatttc tacgttccaa agtgtccagg tttttgagac cttacaaatg actcagccca	1560
cgtgccactc aatacaaaatg ttctgtata ggggttggg gacagagctg tcttccttct	1620
gcatgtcagc acagtcgggtt attgtctgcctt cccgtatcgt tgactcatttta gaggtaattt	1680
tttatagata atacagatattttt ttttttttttttcc cgcacatcgatgtt	1740

gatgttagact gagaatggct ttgagtgca tcagcttctc actgctgtgg gcggatgtct	1800
tggataagatc aagggtggc tgagctggac tttggtcagc ctaggtgaga ctcacctgtc	1860
cttctgggt cttaactcctc ctcaaggagt ctgttagtggaa aaggaggcca cagaataagc	1920
tgcttattct gaaacttcag ctccctctag cccggccctc tctaaggggag ccctctgcac	1980
tcgtgtcag gctctgacca ggcagaacag gcaagagggg agggaaaggag acccctgcag	2040
gctccctcca cccacccitga gacctgggag gactcagttt ctccacagcc ttctccagcc	2100
tgtgtgatac aagtttgc acaggaaactt gagttctaaag cagtgtctgt gaaaaaaaaa	2160
agcagaaaaga attagaaaata aataaaaaact aagcacttct ggagacataa taatgtacat	2220
ttattgccag cttccctcggt tgcaagcttc caccctgcag caaatgcact atgctgactc	2280
tcgcacccctc agctgtgccc tctgacactc tgctggccat tgctgaggg actggggaggt	2340
tcaggtgaaa tgtaattcc tcagtgatg agaatcatca attgtc	2386
<210> 17	
<211> 68	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> pNICY Sequence	
<400> 17	
agctcgaaat tccgagctt gatcctctag agcggccgcc gactagttag ctcgtcgacc	60
cgggaaatt	68
<210> 18	
<211> 68	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> pNICY Sequence	
<400> 18	
aattaattcc cgggtcgacg agctcaactag tcggcggccg ctctagagga tccaaagctcg	60
gaattccg	68
<210> 19	
<211> 24	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Universal Primer	
<400> 19	
agcggataac aatttcacac agga	24
<210> 20	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Universal Primer	
<400> 20	
tgtaaaacgtcgccaggt	18

<210> 21  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 21  
tcccagaaca tctgaacgcc 20

<210> 22  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 22  
accactcacc gatgtattcg 20

<210> 23  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 23  
ttcctgcca tagaggacga 20

<210> 24  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 24  
gcatgtcagc acagtccgggt 20

<210> 25  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 25  
atcttatccaa gacatccgcc 20

<210> 26

<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 26  
ggactccctgg gctgtgtact 20

<210> 27  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 27  
gttcccactg ggcaacgaat 20

<210> 28  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Custom Sequencing Primer

<400> 28  
ggaggctttt tagccacgtc 20

<210> 29  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Sense RT-PCR Primer

<400> 29  
tacaacaccca ccactcacc 19

<210> 30  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense RT-PCR Primer

<400> 30  
ttccgcataa ccagatag 18

<210> 31  
<211> 516  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 31

Val Thr Thr Ile Arg Thr Ser Val Thr Phe Lys Leu Asn Glu Gly Lys  
 1 5 10 15  
 Cys Ser Leu Lys Asn Ala Glu Leu Phe Pro Glu Gly Leu Arg Pro Ala  
 20 25 30  
 Leu Pro Glu Lys His Ser Ser Val Lys Glu Ser Phe Arg Tyr Val Asn  
 35 40 45  
 Leu Thr Cys Ser Ser Gly Lys Gln Val Pro Gly Ala Pro Gly Arg Pro  
 50 55 60  
 Ser Thr Pro Lys Glu Met Phe Ile Thr Val Glu Phe Glu Leu Glu Thr  
 65 70 75 80  
 Asn Gln Lys Glu Val Thr Ala Ser Cys Asp Leu Ser Cys Ile Val Lys  
 85 90 95  
 Arg Thr Glu Lys Arg Leu Arg Lys Ala Ile Arg Met Leu Arg Lys Ala  
 100 105 110  
 Val His Arg Glu Gln Phe His Leu Gln Leu Ser Gly Met Asn Leu Asp  
 115 120 125  
 Val Ala Lys Lys Pro Pro Arg Thr Ser Glu Arg Gln Ala Glu Ser Cys  
 130 135 140  
 Gly Val Gly Gln Gly His Ala Glu Asn Gln Cys Val Ser Cys Arg Ala  
 145 150 155 160  
 Gly Thr Tyr Tyr Asp Gly Ala Arg Glu Arg Cys Ile Leu Cys Pro Asn  
 165 170 175  
 Gly Thr Phe Gln Asn Glu Glu Gly Gln Met Thr Cys Glu Pro Cys Pro  
 180 185 190  
 Arg Pro Gly Asn Ser Gly Ala Leu Lys Thr Pro Glu Ala Trp Asn Met  
 195 200 205  
 Ser Glu Cys Gly Gly Leu Cys Gln Pro Gly Glu Tyr Ser Ala Asp Gly  
 210 215 220  
 Phe Ala Pro Cys Gln Leu Cys Ala Leu Gly Thr Phe Gln Pro Glu Ala  
 225 230 235 240  
 Gly Arg Thr Ser Cys Phe Pro Cys Gly Gly Leu Ala Thr Lys His  
 245 250 255  
 Gln Gly Ala Thr Ser Phe Gln Asp Cys Glu Thr Arg Val Gln Cys Ser  
 260 265 270  
 Pro Gly His Phe Tyr Asn Thr Thr His Arg Cys Ile Arg Cys Pro  
 275 280 285  
 Val Gly Thr Tyr Gln Pro Glu Phe Gly Lys Asn Asn Cys Val Ser Cys  
 290 295 300  
 Pro Gly Asn Thr Thr Thr Asp Phe Asp Gly Ser Thr Asn Ile Thr Gln  
 305 310 315 320  
 Cys Lys Asn Arg Arg Cys Gly Gly Glu Leu Gly Asp Phe Thr Gly Tyr  
 325 330 335  
 Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn Thr Glu Cys  
 340 345 350  
 Thr Trp Thr Ile Asn Pro Pro Pro Lys Arg Arg Ile Leu Ile Val Val  
 355 360 365  
 Pro Glu Ile Phe Leu Pro Ile Glu Asp Asp Cys Gly Asp Tyr Leu Val  
 370 375 380  
 Met Arg Lys Thr Ser Ser Asn Ser Val Thr Thr Tyr Glu Thr Cys  
 385 390 395 400  
 Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ser Arg Ser Lys Lys Leu  
 405 410 415  
 Trp Ile Gln Phe Lys Ser Asn Glu Gly Asn Ser Ala Arg Gly Phe Gln  
 420 425 430

Val Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Gln Glu Leu Ile Glu Asp  
 435 440 445  
 Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu Ile  
 450 455 460  
 Leu Lys Asp Lys Lys Leu Ile Lys Ala Leu Phe Asp Val Leu Ala His  
 465 470 475 480  
 Pro Gln Asn Tyr Phe Lys Tyr Thr Ala Gln Glu Ser Arg Glu Met Phe  
 485 490 495  
 Pro Arg Ser Phe Ile Arg Leu Leu Arg Ser Lys Val Ser Arg Phe Leu  
 500 505 510  
 Arg Pro Tyr Lys  
 515

<210> 32  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 32  
Thr Phe Gln Asn Glu Glu Gly Gln Met Thr Cys Glu Pro Cys Pro Arg  
 1 5 10 15  
Pro Gly Asn Ser Gly Ala Leu Lys Thr Pro Glu Ala Trp  
 20 25

<210> 33  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 33  
Thr Thr Thr His Arg Cys Ile Arg Cys Pro Val Gly Thr Tyr Gln Pro  
 1 5 10 15  
Glu Phe Gly Lys Asn Asn Cys Val Ser Cys Pro Gly  
 20 25

<210> 34  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 34  
Thr Gln Cys Lys Asn Arg Arg Cys Gly Gly Glu Leu Gly Asp Phe Thr  
 1 5 10 15  
Gly Tyr Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn Thr  
 20 25 30  
Glu Cys Thr Trp Thr Ile Asn Pro Pro Pro Lys Arg Arg  
 35 40 45

<210> 35

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 35

Phe Thr Ser Arg Ser Lys Lys Leu Trp Ile Gln Phe Lys Ser Asn Glu  
1 5 10 15

Gly Asn Ser Ala Arg Gly Phe Gln Val Pro Tyr Val Thr Tyr Asp  
20 25 30

<210> 36

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Flag Peptide

<400> 36

Asp Tyr Lys Asp Asp Asp Asp Lys  
1 5

<210> 37

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Myc/His Peptide

<400> 37

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn Met His Thr Glu His  
1 5 10 15

His His His His His  
20